POLAND / Chemical Technology. Chemical Products and Their Application. Safety and Sanitation. H-6

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 78180.

Author : Szmaj, Edward.
Inst : Not given.
Title : Harmful Dyes and Clarifiers.

Orig Pub: Szklo i ceram., 1958, 9, No 3, 66-71.

Abstract: The toxic effect of a series of dyes and clarifiers used in the glass industry (Sb_2S_3, As_2O_3, $NaNO_3$, KNO_3, $Ca(NO_3)_2$, $KClO_3$, $Na_2Cr_2O_7$, cryolite, CaF_2, Na_3AlFe_6, yellow and white phosphorus and compounds of Cd, Mn, Cu, Ni and Se, is dicussed. The maximum admissible concentration of dust and vapors of the above mentioned substances are presented, and a series of preventive measures:

Card 1/2

17

POLAND/Chemical Technology. Chemical Products and Their Applications. Safety and Sanitation. H

Abs Jour: Ref Zhur-Khim., No 8, 1959, 27968.

Author : Szmaj, E.
Inst :
Title : Harmful Chemicals Used in Glass Making.

Orig Pub: Szklo i Ceram, 9, No 4, 95-98 (1958) (in Polish)

Abstract: The harmful effects on the human organism of NH_3, $AgNO_3$, CN compounds, HF, H_2SO_4, and Hg are discussed. The toxic effects of soluble glass and of glass wool are described. Soluble glass has a harmful effect on the mucous membrane of the respiratory tract and on the skin. Glass wool causes an irritation of the upper respiratory tract, a dry and burning feeling in the throat, hoarseness, an inflammation of the vocal

Card : 1/2

154

H-6

POLAND / Chemical Technology, Chemical Products and Their Application. Safety and Sanitation.

Abs Jour : Ref Zhur - Khimiya, No 5, 1959, No. 15888

Author : Szmaj, E.
Inst : Not given
Title : Poisonous Materials Employed in the Glass Industry

Orig Pub : Szklo i ceram., 1958, 9, No 6, 167-170

Abstract : A brief review of the toxic properties of acrolein, benzene, calcium carbide, fire-resistant materials, H_2S and CO. Data on the prophylactics and on first-aid are presented. -- L. Sedov

Card 1/1

ORIG. PUB. : Szkło i ceramika, 1959, 10, No 3, 76-79

ABSTRACT : The use of graphite lubricants provides a considerable industrial and economical effect, increases the durability of molds and improves the working conditions. Poisonings by carbon monoxide, acrolein and lead compounds, which occur with the use of other lubricants, are avoided. The process of preparation and application of the graphite lubricant ZZ-20 is described.-- L. Sedov

*Materials. Concrete. Glass

CARD: 1/1

H-46

SZMAJ, E.

The effect of glass dust on the human organism. p. 13.

OCHRONA PRACY. (Centralna Rada Zwiadowych i Dentralny Instytut Ochrony Pracy. Warszawa, Poland. Vol 14, no. 3, Mar. 1959.

Monthly list of East European Accessions (EEAI)LC, vol. 8, no. 8, Aug. 1959.

Uncl.

SZMAJ, Edward

Benevolence and health. Szklo i Ceramika 13 no.2:44-46 F '62.

M.

POLAND/Cultivated Plants - Grains.

Abs Jour : Ref Zhur - Biol., No 10, 1958, 44036

Author : Szmal, Bogumil

Inst : Institute for Genetics and Selection, Superior Agricultural School at Poznan

Title : Familiarization Studies of Gluten in Several Lines of Wheat Obtained by Crossing Triticum vulgare Vill x Agropyrum elongatum Host.

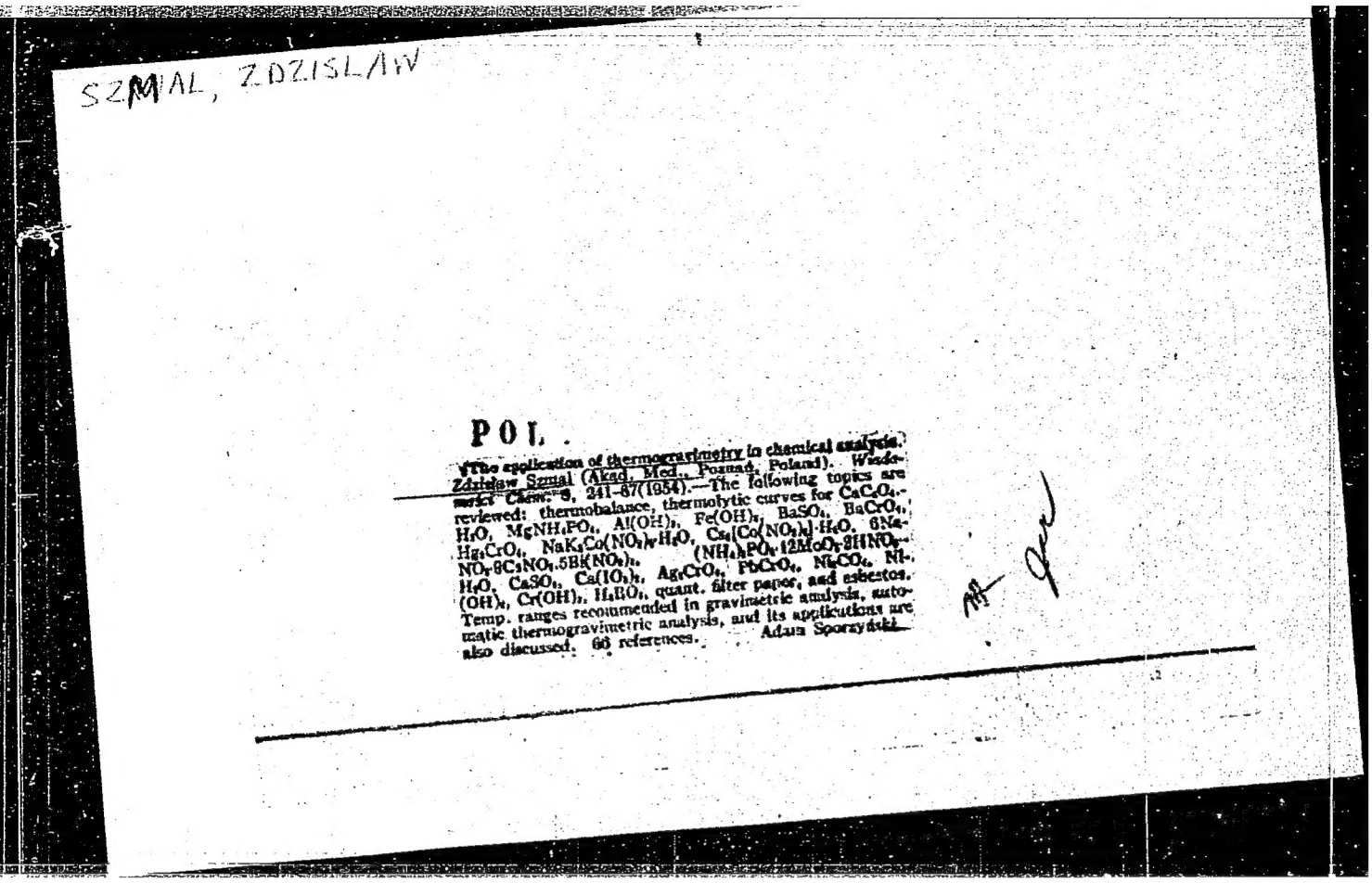
Orig Pub : Acta agrobotan., 1956, (1957), 5, 5-17

Abstract : Three lines of hybrids of wheat with quack grass (10th generation), with the mother form of Belaya Kleshchevskaya (winter wheat) and with spring wheat varieties were compared at the Institute of Genetics and Selection of the Higher Agricultural School in Poznan in 1953.

Card 1/2

CHMURA, Kazimierz; SZMAL, Zbigniew

IId International Conference on Mineralogy and Petrografy of laoms in Prague. Przegl geol 9 no.12:663-665 '61.



SZMAL, ZDZISLAW

POL.

The application of thermogravimetry in chemical analysis. Zdzisław Szmal (Akad. Med., Poznań, Poland). *Wiadomości Chem.* 8, 241–87(1954).—The following topics are reviewed: thermobalance, thermolytic curves for $CaC_2O_4 \cdot H_2O$, $MgNH_4PO_4$, $Al(OH)_3$, $Fe(OH)_3$, $BaSO_4$, $BaCrO_4$, Hg_2CrO_4, $NaK_2Co(NO_2)_6 \cdot H_2O$, $Cs_2[Co(NO_2)_6] \cdot H_2O$, $6NaNO_3 \cdot 8C_5NO_4 \cdot 5Bi(NO_3)_3$, $(NH_4)_3PO_4 \cdot 12MoO_3 \cdot 3HNO_3 \cdot H_2O$, $CaSO_4$, $Ca(IO_3)_2$, Ag_2CrO_4, $PbCrO_4$, Ni_2CO_4, $Ni(OH)_2$, $Cr(OH)_3$, H_3BO_3, quant. filter paper, and asbestos. Temp. ranges recommended in gravimetric analysis, automatic thermogravimetric analysis, and its applications are also discussed. 66 references. Adam Sporzyński

GAWECKA, I.; SZMAL, Z.; VENULET, J.

Effect of physostigmine on action of pendiomide. Acta physiol. polon. 7 no.3:351-358 1956.

1. Z Zakladu Farmakologii Instytutu Lekow w Warszawie Kierownik: dr. J. Venulet.
(PHYSOSTIGMINE, effects,
on reactivity to pendiomide (Pol))
(AUTONOMIC DRUGS, effects,
pendiomide, eff. of physostigmine on reactivity (Pol))

SZMAL, ZDZISLAW.

Analiza chemiczna ilosciowa.

Warszawa, Poland. Panstwowy Zaklad Wydawn. Lekarskich, 1958, 319p.

Monthly List of European Accessions (EEAI) LC, Vol. 8, no. 7, July 1959

Uncl.

SZNAL, ZDZISLAW.

Badania hydrochemiczne jezior lobeliowych Pomorza Zachodniego. Pozan, Panstwo-
lobeliowych Pomorza Zachodniego. Ponzan, Panstwowe Wydawn. Naukowe, 1959. 106 p.

Monthly List of East European Accessions (EEAI) LC, Vol. 9, no. 2, Feb. 1960

Uncl.

GAWECKA, Irena; SZMAL, Zdzislaw; WOJCIK, Ryszard

Evaluation of biological method for the determination of adrenalin in drugs. Acta physiol.polon. 11 no.3:457-468 My-Je '60.

1. Z Zakladu Farmakologii Instytutu Lekow w Warszawie Kierownik: doc. dr J.Venulet.
(EPINEPHRINE chem)

SZMAL, Zdislaw; VENULET, Jan

Effect of some quarternary ammonium compounds with sulfur in the aliphatic chain on myeoneural transmission. Acta physiol. polon. 13 no.6:717-728 '62.

1. Z Zakladu Farmakologii Instytutu Lekow w Warszawie Kierownik: doc. dr J. Venulet.
(AMMONIUM COMPOUNDS) (SULFUR) (SYNAPSES)

TUSZKIEWICZ, Alfred R.; SZMANEK, Dominik; CZARSKA, Zofia

Phosphatase-thymol index in the differential diagnosis of infectious hepatitis & mechanical jaundice. Polski tygod. lek. 14 no.2:73-75 12 Jan 59.

1. Z II Kliniki Chorob Wewnetrznych A. M. w Lublinie; kierownik: prof. dr A. R. Tuszkiewicz. Lublin, II Klin. Chor. Wewn. A.M.

(HEPATITIS, INFECTIOUS, differ. diag.
obstruct. jaundice, value of phosphatase-thymol index (Pol))
(JAUNDICE, OBSTRUCTIVE, differ. diag.
infect. hepatitis, value of phosphatase-thymol index (Pol))
(LIVER FUNCTION TESTS
phosphatase-thymol index in differ. diag. of infect. hepatitis & obstruct. jaundice (Pol))

SZMA SKI, H.

TECHNOLOGY

PERIODICAL: POMIARY, AUTOMATYKA, KONTROLA. Vol. 4, no. 8, Aug. 1958.

AZIMANSKI, H. Precision of measurement, errors, corrections, and tolerance. Pt. 1.

(To be contd.) p. 368.

Monthly List of East European Accessions (EEAI) LC Vol. 8, no. 4

April 1959, Unclass.

WOLANSKI, Adam; SZMATLOCH, Eugeniusz; DZIEZA, Irena

Analysis of acquired heart defects according to data of the 1st Internal Disease Clinic of the Silesian Academy of Medicine. Reumatologia (Warsz.) 1 no.1:51-54 '63.

1. Z I Kliniki Chorob Wewn. Sl. Akademii Medycznej (Kierownik: prof. dr J. Japa).

WOLANSKI, Adam; SZMATLOCH, Eugeniusz

Clinical significance of morphological changes of the 1st excitation wave in the electrocardiogram in premature systole. Polski tygod. lek. 16 no.30:1155-1157 Jl '61.

1. Z I Kliniki Chorob Wewnetrznych Sl. A. M. w Zabrzu; kierownik: prof. dr Jozef Japa.

(ARRHYTHMIA)

WOLANSKI, Adam; SZMATLOCH, Eugeniusz; SZACHOWSKI, Jedrzej; CZARNECKA, Anna

Result of some respiratory function tests in kyphoscoliosis. Pol. arch. med. wewnet. 32 no.8:999-1002 '62.

1. Z I Kliniki Chorob Wewnetrznych Sl. AM Kierownik: prof. dr med. J. Japa.
(KYPHOSIS) (SCOLIOSIS) (RESPIRATORY FUNCTION TESTS)

FOREMNY, Zbigniew; MACHALSKI, Marek; SZMATLOCH, Eugeniusz

Attempted use of posterior pituitary extracts in bleeding esophageal varices. Pol. tyg. lek. 18 no.46:1736-1737 11 N'63

1. Z I Kliniki Chorob Wewnetrznych Sl. AM w Katowicach; kierownik: prof.dr. Jozef Japa.

*

GREGORCZYK, K.; SZMATLOCH, [illegible]

Selected clinical problems in 763 cases of myocardial infarction. Kardiol. Pol. 7 no.4:265-268 '64

1. Z I Kliniki Chorob Wewnetrznych Slaskiej Akademii Medycznej w Katowicach (Kierownik: prof. dr. J. Japa) i z I Kliniki Chorob Wewnetrznych Pomorskiej Akademii Medycznej w Szczecinie (Kierownik: doc. dr. K. Gregorczyk).

Distr: 4E2c

Recovery of metals. Centralny Zarząd Przemysłu Metali Nieżelaznych (by A. Leśniak, K. Kurski, W. Kwiecień, and W. Szmeja). Pol. 40,626, Jan. 27, 1958. A by-product of the production of bearing alloys contg. oxides of Cu, Sn, Sb, Pb, Zn, Cd, and Ni can be converted on redn. to a product contg. Cu 20–40, Sn 20–40, Sb 10–30, Pb 2–20%, and small amts. of Zn, Cd, and Ni. The product is ground and oxidized in a revolving furnace at 500–800° and extd. with an $(NH_4)_2CO_3$ soln. contg. NH_4OH. Cu, Zn, and Ni-amino compd. are dissolved, the ext. is heated, and the CuO ppt. is sepd. Nonsol. oxides are reduced with H or CO, and a Sn–Sb–Pb alloy is obtained. K. Bojarowska

6
1-mje (jd)
1

SZMEJA, Zygmunt

Hearing and vestibular apparatus in scleroma treated with streptomycin. Otolar. polska 8 no.1:37-43 1954.

1. Z Kliniki Otolaryngologicznej Akademii Medycznej w Poznaniu. Kierownik: prof. dr A.Zakrzewski.

(STREPTOMYCIN, effects,
on hearing & vestibular appar. in rhinoscleroma)
(RHINOSCLEROMA, therapy,
streptomycin, eff. on hearing & vestibular appar.)
(HEARING, effect of drugs on,
streptomycin, in ther. of rhinoscleroma)
(VESTIBULAR APPARATUS, effect of drugs on,
streptomycin, in ther. of rhinoscleroma)

SZMEJA, Zygmunt

Case of foreign body of the esophagus complicated by spontaneous perforation of the wall of the aorta. Otolar.polska 9 no.4:337-341 1955.

1. Z Kliniki Otolaryngologicznej A M w Poznaniu. Kierownik: prof. dr A. Zakrzewski.

(ESOPHAGUS, foreign bodies,
with aortic rupt.(Pol))
(FOREIGN BODIES,
esophagus, with aortic rupt.(Pol))
(AORTA, rupture,
in esophageal for.body(Pol))

SZMEJA, Zygmunt

Improvement of hearing following nasopharyngeal irradiation with radium. Otolar. polska 10 no.3-4:335-340 1956.

1. Z Kliniki Otolaryngologicznej A.M. w Poznaniu Kierownik Kliniki: prof. dr A. Zakrzewski.

(HEARING DISORDERS, therapy,
radium irradiation of nasopharynx (Pol))
(RADIUM, therapeutic use,
hearing disord., irradiation of nasopharynx (Pol))
(NASOPHARYNX, effect of radiations,
radium, irradiation in ther. of hearing disord. (Pol))

SZMEJA, Zmgmunt; TOKARZ, Feliks

Value of audiometry & especially the recruitment test in the diagnosis of tumors of the acoustic nerve. Otolar. polska 11 no.4:397-406 1957.

1. Z Kliniki Otolarynologicznej A. M. w Poznzniu. Kierownik: prof. A. Zakrzewski i z Kliniki Neurochirurgii A. M. w Poznaniu Kierownik: prof. H. Powiertowski.

(NERVES, ACOUSTIC, neoplasms
diag., audiometry & recruitment test (Pol))
(HEARING TESTS
audiometry & recruitment test in cancer of acoustic nerves, diag. value (Pol))

SZMEJA, Zygmunt

Surgical treatment of congenital medial cervical cysts & fistulas.
Otolar polska 12 no.1:35-41 1958.

1. Z Kliniki Otolaryngologicznej A. M. w Poznaniu Kierownik: prof. dr A. Zakrzewski.

(BRANCHIOMA, surg.
with resection of hyoid bone (Pol))
(BRANCHIAL REGION, abnorm.
unclased cleft, surg. with resection of hyoid bone (Pol))
(HYOID BONE, surg.
resection in surg. of branchioma & branchial fistula (Pol))

BIALEK, E.; TOKARZ, F.; SZMEJA, Z.

Otoneurological examination following brain stem injuries. Otolaryng. Pol. 16 no.1a:255-259 '62.

1. Z Kliniki Otolaryngologicznej AM w Posnaniu Kierownik: prof. dr med. A. Zakrzewski i z Kliniki Neurochirurgii AM w Poznaniu Kierownik: dr H. Powiertowski.

(BRAIN STEM wds & inj) (EAR physiol)

SZMEJA, Zygmunt; PRUSZEWICZ, Antoni; DUKIEWICZ, Kazimierz.

A method for mass preliminary hearing tests with speech audiometry in school children. Otolaryng. pol. 17 no.4:367-369 '63.

1. Z Kliniki Otolaryngologicznej Akademii Medycznej w Poznaniu (kierownik: prof.dr. A.Zakrzewski) i z Zakladu Fonograficznego UAM w Poznaniu (kierownik: doc. W.Jassem).

*

SZMEJA, Zygmund; GERWEL, Tadeusz

Apropos of the auditory localization in elderly persons studied in a free auditory field. Otolaryng. Pol. 18 no.2:223-229 '64.

1. Z Kliniki Otolaryngologicznej Akademii Medycznej w Poznaniu (Kierownik: prof. dr. A. Zakrzewski).

KIRCHA, Zygmunt

Studies on auditory localization in Ménière's disease. Otolaryng. pol. 18 no.5:945-952 '64

1. 3 Kliniki Laryngologicznej Akademii Medycznej w Poznaniu (Kierownik: prof. dr. A. Zakrzewski).

SZMEJA, Zygmunt; KRUK-ZAGAJEWSKA, Aleksandra

On the matter of blue tympanic membranes. Otolaryng. Pol. 19 no.3:383-386 '65.

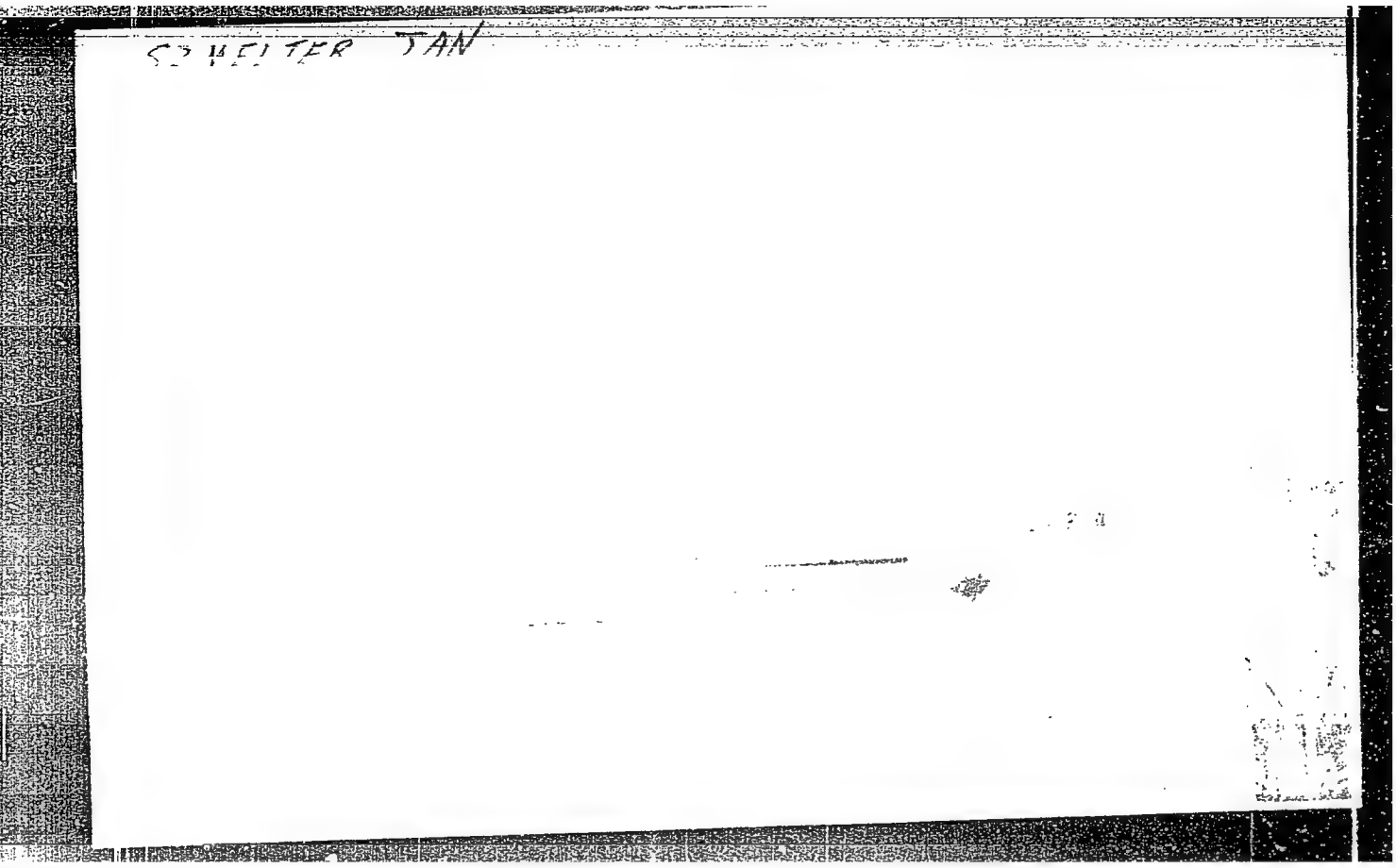
1. Z Kliniki Otolaryngologicznej AM w Poznaniu (Kierownik Kliniki: prof. dr. A. Zakrzewski).

Szmelter J

Szmelter J., Eng. "Equation for Deflexion Lines of a Beam with Irregular Section." (Rowanie linii ugiecia belki o zmiennym przekroju). Przeglad Mechaniczny, No. 4-5-6, 1949, pp. 143-146, 10 figs.

This is a description of the author's own method of calculating the line of deflexion of beams with a fixed or an irregular section, loaded with multiple forces. Derivation of the formulae has been omitted but their accuracy is proved by the description of method given. The conclusion provides an example of calculation of the line of deflexion of a shaft.

SO: Polish Technical Abstracts - No. 2, 1951



SZMELTER, J.

Distribution of inter-tooth force along the generatrix. p. 373.
Vol. 2, no. 4, 1955 Warszawa ARCHIWUM BUDOWY MASZYN

SOURCE: East European Acession List (EEAL) Library of Congress
Vol. 5, no. 8, August 1956

P/033/60/012/003/005/007
D242/D302

AUTHOR: Szmelter, Jan (Łódź)

TITLE: A method of sequence of networks in problems of elasticity

PERIODICAL: Archiwum mechaniki stosowanej, v. 12, no. 3, 1960, 357 - 370

TEXT: The author considers an elastic system which he assumes to be covered by a network. The system is assumedly loaded by forces P_i concentrated at nodes of the network. The state of displacements of the system is determined by the displacements w_i of all the nodes of the net. The subscript i indicates the number of the nodes. If there exist several components of forces and displacements at one node, then this node requires several numbers i so that P_i or w_i denotes one component only. The equation of equilibrium of an i-th node is given as

Card 1/9

A method of sequence of ...

$$P_i + \sum_{k=1}^{n} a_{ik} w_k = 0 \quad (i = 1, 2, \ldots, n). \quad (1.1)$$

The coefficients $a_{ik} = a_{ki}$ are known, and define the elastic properties of the system. The quadratic form $\sum a_{ik} w_i w_k$ is positive, definite and equal to the double strain energy of the system. A continuous elastic system may be approximated by a net, for instance, by using the finite-differences method. Considering the problem of equilibrium of the system, the displacements of some "immovable" nodes and the forces at remaining "movable" nodes are known. It is necessary to find the displacements of the movable nodes so as to satisfy Eq. (1.1). The general problem may be simplified by resolving the unknown displacement w_i into two parts $w_i' + w_i''$. The first displacement w_i' has the given values at the immovable nodes and is arbitrary at the movable nodes. The second displacement w_i'' vanishes

A method of sequence of ...

at the immovable nodes and is unknown at the movable nodes. The displacement w_i'' satisfies the equations of equilibrium when the corresponding forces are equal to

$$P_i'' = P_i - \sum a_{ik} w_k'.$$

In his considerations the author assumes that the displacements vanish at the immovable nodes. In the case of a fine net containing a great number of nodes, a direct solution of Eq. (1.1) is laborious. In the present paper the author discusses an iterative method for the solution. He states that the process is simple and converges quickly, even in the case of a very fine network. He forms the following sequence of networks: The first network is that which determines the elastic system considered. Each subsequent network contains every second node of the previous network. The final net contains one node only. At first, he determines the displacement of the node of the final network. He then calculates the displacements of the remaining nodes of the preceding net, and then passes to

Card 3/9

A method of sequence of ...

the next finer net, etc. The process is finished when the displacements of all the nodes of the initial net are determined. The equation determining the displacement w_k of a k-th node is obtained as follows: The network is loaded by a system of forces Q_i', the corresponding displacements can be taken as "unit displacements" w_i'. By using the reciprocal theorem of Maxwell and Betti, the author obtains

$$- \sum Q_i' w_i + \sum w_i' P_i = 0. \qquad (2.1)$$

The unit displacements w_i' can easily be estimated if the Q_i' form a system of forces in equilibrium. In this case, the unit displacements w_i' tend to zero at a considerable distance from the points of application of the forces Q_i' which are calculated from (1.1)

$$Q_i' = - \sum a_{ik} w_k'. \qquad (2.2)$$

In general, these forces will not be concentrated at the chosen no-

Card 4/9

P/033/60/012/003/005/007
D242/D302

A method of sequence of ...

des only, and Eq. (2.1) will thus contain more than one unknown. To avoid this, the author substitutes in (2.1) new forces Q_i'' acting at the chosen nodes only. A force Q_i'' is the resultant of the forces Q_i' acting in the region surrounding the point of application of Q_i''. In this way the exact equation (2.1) is replaced by the following approximate equation

$$- \sum Q_i'' w_i + \sum w_i' P_i = 0. \qquad (2.3)$$

The author uses a relaxation method to obtain a better approximation. By substituting the approximate values of w_i in (1.1) he obtains the residuals instead of zero. He then considers the residuals as a new load system producing new displacements which are corrections of the previously computed displacements. These corrections are calculated by using Eqs. (2.3). He then finds the second residuals and the second corrections, etc. This process is repeated until the residuals become sufficiently small. As an example, the author discusses the equilibrium of a string subjected to tension

Card 5/9

A method of sequence of ...

by a longitudinal force H = 1 and a distributed lateral load p(x). The equation of equilibrium is given as

$$p + w'' = 0. \tag{3.1}$$

He assumes that the string is supported at its ends, thus

$$w(0) = w(1) = 0. \tag{3.2}$$

The string is divided into short sections of length h. The load p(x) is replaced by statically equivalent forces P_i/h concentrated at the nodes. Then (3.1) and (3.2) are replaced by the following system of equations corresponding with (1.1)

$$\begin{cases} P_i + w_{i-1} - 2w_i + w_{i+1} = 0 \quad (i = 1, 2, \ldots, 7) \\ w_0 = w_8 = 0. \end{cases} \tag{3.3}$$

For solving the problem the author uses a sequence of three networks. As a further example the author discusses the problem of a membrane subjected to a uniform tension equal to unity which is loaded by the pressure p(x, y) and boundary forces $p_n(s)$. The dis-

Card 6/9

A method of sequence of ...

placement w(x, y) of the membrane satisfies the following equations

$$p + \triangle w = 0, \qquad p_n - \frac{\partial w}{\partial n} = 0 \tag{4.1}$$

where n denotes the external normal to the boundary. By covering the membrane with a square net, Eqs. (4.1) can be replaced by equations in the form of (1.1), where P_i denotes the lateral load concentrated at an i-th node. This force is statically equivalent to the given load p and p_n. The displacements w_i' are obtained by superposition of a singular solution of an unlimited network loaded at the origin of the coordinate system by a force -1000. This solution for the membrane has the following form

$$w(hi, hk) = \frac{1000}{4} \ln (i^2 + k^2) + 257.3. \tag{4.2}$$

In the case of a network, this solution is corrected (using the relaxation method) at points near the origin and tabulated in Fig. 4.

Card 7/9

P/033/60/012/003/005/007
D242/D302

A method of sequence of ...

The author gives two methods for obtaining the coefficients, namely for the case where the nodes are at a considerable distance from the boundary and also where the coefficients are near to the boundary. The latter case is discussed both for the nodes near the immovable boundary and for those near a free boundary. The author then considers a numberical example of a twisted prismatical bar. There are 15 figures and 5 references: 1 Soviet-bloc and 4 non-Soviet-bloc. The four references to the English-language publications read as follows: A.E.H. Love, A treatise on the mathematical theory of elasticity, New York, 1944; S. Timoshenko, J.N. Goodier, Theory of ealsticity, New York, 1951; R.V. Southwell, Relaxation methods in theoretical physics, Oxford, 1949; D.N. de G. Allen, Relaxation methods, New York 1954.

ASSOCIATION: Politechnika Łódzka (Łódz Politechnic)

SUBMITTED: November 13, 1959

Card 8/9

P/033/61/013/001/005/009
D242/D301

24.4200 1327, 1109, 1191 also 2807

AUTHORS: Szmelter, J., Sulikowski, T. and Lipiński, J. (Łódź)

TITLE: Bending of a rectangular plate clamped at one edge

PERIODICAL: Archiwum mechaniki stosowanej, v. 13, no. 1, 1961 63-75

TEXT: The paper shows the computation and tabulation of the systems of orthogonal functions for solving the particular case of a plate clamped at one edge. This was done because in the special case the orthogonal functions are not as simple as those for simple bending. A plate is considered clamped (as shown in Fig. 1) at the edge $x = 0$, and is loaded by forces perpendicular to the plane xy. From energy considerations the displacement functions $w_i(x,y)$ have the form of polynomials

$$w_i(x,y) = \sum_{n,m} A_{i,\,nm}(x/b)^n(y/a)^m \qquad (3.1)$$

The coefficients Ai, nm should be determined such that the boundary conditions and orthogonality conditions are satisfied. It follows

Card 1/6

Bending of a rectangular plate...

that n = 2,3,4...., m = 0,1,2... The authors have calculated the values of the first 30 polynomials for the ratios b/a = 1 and b/a = 0.316. In an example on a uniformly loaded plate described later, it is stated that the results obtained by using 8 polynomials differ from those using 30, by only 1.5%. As examples, the case of (a) a uniformly loaded plate, and (b) a plate loaded by a force concentrated at the corner are given: (a) The work of the force on the displacement is

$$L_i = \begin{cases} 0 & \text{when } i \text{ is odd,} \\ 2qab \sum_{nm} A_{i,nm}/(n+1)(m+1) & \text{when } i \text{ is even.} \end{cases}$$

where q is the uniformly distributed load. The displacement w is given by

$$w(x,y) = (b^3/2Da) \sum_{i=0}^{\infty} L_i w_i(x,y) \qquad (2.12)$$

The displacements are given in Table 5 for a plate with ratio of dimensions b/a = 1. (b) $L_i = P_w$ (b,a), and w_i is found as above in (a). The displacements are given in Table 6 for the case b/a = 1.

Card 2/6

23522
P/033/61/013/001/005/009
D242/D301

Bending of a rectangular plate...

30 polynomials are used. (Table 6). A simple experiment gave values which agree with those tabulated (Ref. 5: A. Mitzel i K. Nowak, Płyta wspornikowa obciążona siła skupiona, Księga Jubileuszowa Prof. Witolda Wierzbickiego, Warszawa 1959). A great influence of the mode of clamping the edge on the results of the experiments was observed. There are 6 tables, 3 figures and 5 references: 3 Soviet-bloc and 2 non-Soviet-bloc. The reference to the English-language publication reads as follows: S. Timoshenko, Theory of Plates and Shells, New York - London, 1940.

ASSOCIATION: Technical University of Łódź

SUBMITTED: May 10, 1960

Card 3/6

Bending of a rectangular plate...

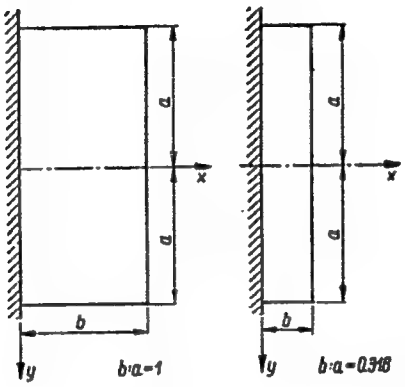


Fig. 1

Fig. 1

Card 4/6

Bending of a rectangular plate...

	$x/b = 0.0$	0.2	0.4	0.6	0.8	1.0
$y/a = 0.0$	$(10^4 D/qb^4)w = 0$	180	620	1209	1869	2547
0.2	0	180	620	1209	1868	2546
0.4	0	180	620	1207	1863	2539
0.6	0	177	615	1199	1851	2526
0.8	0	170	598	1179	1830	2503
1.0	0	152	560	1137	1798	2473

Table 5

Card 5/6

Bending of a rectangular plate...

Table 6

	$x:b = 0.0$	0.2	0.4	0.6	0.8	1.0
$y/a = -1.0$	$(10^4 2D/Pb^2)w = 0$	5	61	203	430	710
−0.8	0	29	132	333	615	922
−0.6	0	59	225	490	832	1208
−0.4	0	88	320	664	1082	1529
−0.2	0	111	416	863	1399	1959
0	0	138	530	1120	1830	2571
+0.2	0	179	691	1462	2390	3360
+0.4	0	244	921	1911	3085	4314
+0.6	0	334	1218	2471	3935	5476
+0.8	0	431	1544	3100	4920	6869
+1.0	0	502	1815	3691	5941	8369

Card 6/6

SZMELTER, Jan

Siphon with many branches. Wlokiennictwo Lodz no.9:43-48 '62.

1. Katedra Mechaniki Technicznej, Politechnika, Lodz.

SZMERCSANYI, I.

SZMERCSANYI, I. - Important results of our research on polyester contact resins. p. 248. Vol. 11, no. 8, Aug. 1956-MAGYAR KEMIKUSOK LAPJA - Budapest, Hungary

SOURCE: East European Accessions List (EEAL) Vol. 6, No. 4--April 1957

SZMERCSANYI, I.

Distr: 4E2c(j)/4E3b/4E3d

1467/60. 678.674.017

Determination of unsaturated linkages in unsaturated polyesters. K. Grégor, I. Szmercsányi, E. Bódi. *Magyar Kémikusok Lapja*, Vol. 15, 1960, No. 2, pp. 72—74, 3 figs., 3 tabs.

The unsaturated component of unsaturated polyesters is maleic or fumaric acid. Determination of the ethylene linkages may take place by the decomposition and hydrolysis of the polyester. The purpose of the present investigation was to find a suitable method of saponification, a way of determining the ethylene linkages by bromine chloride standard solution and analyzing maleic and fumaric acids by means of polarography. The saponification of the polyester resin was carried out at room temperature by a 20% excess of 0.5—*N* NaOH; then the excess alkali was titrated in the presence of phenolphthalein indicator with 0.5—*N* HCl. The neutral solution was evaporated to dryness in a dish and the residue dissolved in distilled water; this solution was used for the determination of the double bonds. It is known that the bromate and bromide ions react in the presence of hydrochloric acid quantitatively to give bromine chloride: $BrO_3^- + 2Br^- + 3Cl^- + 6H^+ = 3BrCl + 3H_2O$ which can be added to unsaturated organic compounds. A bromine chloride solution was used for determining the number of the double bonds also in saponified unsaturated polyesters. The maleate and fumarate contents of unsaturated polyester condensates were analyzed by polarography proving that the number of double bonds was in good agreement with the results of the bromine chloride addition.

4
1-BW(BW)
2-Jaf (NB)(May)
3

KATONA, Zoltan; SZMESKO, Janos

Pulse measurement by electronic method. Meres automat 12 no.4/5:151-155, 162 '64.

1. MEDICOR Works.

SZMICSEK, Sandor

Increasing the separating capacity of rectifying columns. Magy kem lap 15 no.8:362-364 Ag '60.

1. Dunai Vasmu

SZMICSEK, Sandor, levelezo aspirans

Application of foam column in the Thylox type desulfurization plant. Veszprem vegyip egy kozl 7 no.3:271-280 '63.

1. Factory Unit of Coke Chemistry, Danubian Ironworks.

23307
P/C.4/6./040/001/003/007
A221/A126

21.1700

AUTHORS: Grossman, Andrzej; Szmid, Zofia, and Szudek, Maria

TITLE: X-ray investigation of coke, obtained by naphthalene pyrolysis, for its graphitization ability

PERIODICAL: Przemysł Chemiczny, v. 40, no. 1, 1961, 15-18

TEXT: The aim of this research was to find out, whether there is any dependency between conditions of coke preparation and its graphitization ability and whether the pyrolysis temperature of 1,200°C can be reduced without deterioration of coke and graphite properties. The first part of this research is the continuation of Professor B. Buras' work (Ref. 1: B. Buras, Some Experiments Concerning File Materials, Materiały Konferencji Genewskiej 1955, Paper 943). The pyrolysis was carried out in a ceramic pipe of 55 mm internal diameter, heated in a silicon carbide oven. The coke formed settled inside the pipe. The pyrolysis was carried out at 850, 900, 1,000, 1,100 and 1,200°C. The graphitization was carried out in a Acheson type laboratory resistance oven with square carbon electrodes. Samples of coke in closed carbon crucibles were placed in the middle of the oven. The temperature was measured by means of an optical pyrometer.

Card 1/3

23307

P/014/61/040/001/003/007
A221/A126

X-ray investigation of coke ...

Graphitization was carried out at 1,400, 1,700 and 1,900°C for four hours each time and finally for thirty hours at 2,200°C. Electric resistance drops rapidly during the intense degasification below 1,000°C, but stabilizes at higher temperatures. X-ray examination was carried out by the powder method, using the VEM apparatus, the Debye-Scherrer camera of 57.3 mm diameter and colimators with round apertures of 0.5 or 0.8 mm diameter and radiation $CuK\alpha$. Preparations were made by careful crushing of coke or graphite into a fine powder with Canada balsam as binding agent, shaping it into needles of 0.4 to 0.6 mm thickness. For each coke sample and each roasting temperature series of photographs were taken from preparations 0.4, 0.45, 0.5 and 0.6 mm thick. Thus obtained X-ray photographs were examined by Soviet-made micro-photometer MF-2. For comparison, samples made of high-grade Swedish graphite and one made from Romanian coke were also examined. Altogether 51 samples were examined. On the basis of these investigations the authors arrived at the conclusion that the temperature at which pyrolysis is carried out does not affect the degree of graphitization, provided that the period of graphitization is long enough. Basic physico-chemical properties of pyrolytic cokes (carbonation index, content of volatiles, real density, electric resistance and reactivity) do change in relation to temperature attained by coke, no matter whether it is attained during the pyrolysis or during

Card 2/3

X-ray investigation of coke ...

subsequent roasting; only the coke porosity and its apparent density depend on the pyrolysis temperature, which exerts also a decisive influence on coke output during the thermal decomposition. There are 1 photo, 2 figures, 5 tables and 6 Soviet-bloc references.

ASSOCIATION: Politechnika Śląska (Polytechnical Institute) in Gliwice. Instytut Badań Jądrowych (Nuclear Research Institute) in Warsaw and the Zakłady Elektrod Węglowych (Carbon Electrodes Plant) in Racibórz.

SUBMITTED: May 27, 1960

X

Card 3/3

26610
P/014/61/040/002/003/004
A221/A126

15.2250

AUTHORS: Grossman, Andrzej, Szmid, Zofia, and Szudek, Maria

TITLE: X-ray examination of the graphitization ability of cokes obtained through pyrolysis of benzene and its chloroderivatives

PERIODICAL: Przemysł Chemiczny, v. 40, no. 2, 1961, 105 - 108

TEXT: The authors decomposed benzene and its chlorine compounds by a pyrolytic process and examined the cokes thus obtained for their graphitization properties. The reason of this investigation was to confirm the findings of R. E. Franklin [Ref. 5: Acta Cryst., 4, 253 (1951); Ref. 6: Proc. Roy. Soc. (London), A209, 196 (1951); Ref. 7: Brennstoff-Chem., 34, 359 (1953)], who was of the opinion that in organic compounds rich in hydrogen some hydrogen remains in carbonization products and later fosters the process of their graphitization. On the other hand, coke obtained from substances containing little hydrogen and rich of oxygen, are reluctant in forming graphite. For their experiments the authors used benzene, chlorobenzene, meta-dichlorobenzene, 1, 2, 4 trichlorobenzene and hexachlorobenzene. For pyrolysis and graphitization, they used the same apparatus which were used earlier for similar experiments, described in Przemysł Chemiczny

Card 1/4

X-ray examination of the graphitization ability of...

[Ref. 10: A. Grossman, Z. Szmid, M. Szudek, Przem. Chem., 40, (1961)]. In all instances described in this article the pyrolysis was carried out at the temperature of 1,100 C. Solid products of pyrolysis were hard coke, soft coke and soot. Hard cokes were examined in a similar way as described in the report from previous investigations. It was found that the amount of chlorine in raw materials influences not only the amount of coke produced, but its properties as well. Coke density diminishes as the content of chlorine increases, but at the same time electrical resistance of the coke increases. Pyrolytic cokes, partly graphitized cokes and graphites were examined by the Debey-Scherrer powder method, using X-ray VEM apparatus and the Phoenix lamp, cameras for powder-method examination and collimators with a round aperture of 0.5 and 0.8 mm in diameter, CuKα radiation at 45 kv and 14 - 16 ma. Samples for X-ray examination were prepared either by scraping the needles from graphite or shaping them from carefully powdered graphite mixed with Canada balsam. For investigation two series of independently prepared cokes were used. In the first series cokes prepared from benzene, chlorobenzene, m-dichlorobenzene, 1, 2, 4-trichlorobenzene and hexachlorobenzene were examined. They were the products of pyrolytic roasting in a laboratory oven at 1,400, 1,700 and 1,900°C, and in an industrial oven at about 2,200°C. In the second series, the products of hexachlorobenzene pyrolysis and the products of roasting at 1,900°C

X-ray examination of the graphitization ability of...

were not examined. The roasting time of II-nd series of samples was several times longer than that of I-st series of samples and, consequently, their graphitization was much better. The higher the roasting temperature was, the more pronounced and narrower were the lines on X-ray photographs. Having examined the X-ray photograms, the authors arrived at the following conclusions: No relation between the degree of graphitization and the substratum can be confirmed. Cokes from C_6H_6, C_6H_5Cl, and $C_6H_4Cl_2$ graphitize easier, while with cokes from $C_6H_3Cl_3$ this process is slower and weaker. There was no coke formed as a result of roasting the products of C_6Cl_6 pyrolysis. The valuation of coke properties and results of X-ray examination, confirm in principle the role of hydrogen during the process of pyrolysis, in conformity with the interpretation suggested by Franklin (Refs. 5, 6, 7). Only if there is enough hydrogen in the substratum, the coke formed is composed of carbon and hydrogen, otherwise graphitization progresses slowly and some remaining chlorine changes its electrical resistance. The authors express their thanks to Professor B. Buras for help and critical remarks and to Professor I. G. Campbell for suggesting the investigation. There are 4 tables, 2 photos, 2 figures and 10 references: 2 Soviet-bloc and 8 non-Soviet-bloc. The references to the most recent English-language publications read as follows: C. R. Kinney, R. C. Nunn, P. L. Walker jr, Ind. Eng. Chem., 49, 880 (1957); C. R. Kinney, Studies of Producing

26610
P/014/61/040/002/003/004
A221/A126

X-ray examination of the graphitization ability of...

Graphitizable Carbons. Proc. Conf. on Carbon, University of Bufallo (1956).

RECEIVED: May 27, 1960

ASSOCIATION: Politechnika Śląska (Silesian Polytechnical Institute) Gliwice, Instytut Badań Jądrowych (Institute of Nuclear Research) Warsaw, and Zakład Elektrod Węglowych (Carbon Electrodes Plant) in Raciborz

Card 4/4

SZMID, Zofia; SZARRAS, Stanislaw

X-ray observation of Al-single crystals under fast neutron bombardment. Nukleonika 8 no.6:385-390 '63.

1. Institute of Nuclear Research, Warszawa-Swierk, Department of Nuclear Physics.

KARDASZEWICZ, Jerzy; SZMIDEL, Wlodzimierz

Feeding and velocity control of the main drive of rolling mills. Problemy proj hut maszyn 12 no. 2: 49-53 F '64.

1. Biprohut, Gliwice (for Kardaszewicz). 2. Elektromontaz, Warszawa (for Szmidel).

SZMIDER, J.; SZYMAKOWSKI, J.

The high pressure helium-xenon gas scintillation counter as a fast neutron energy and spin polarization analyzer. Inst fiz jadr report no. 266:1-12 '63

1. Instytut Fizyki Jadrowej, Krakow.

NIEWODNICZANSKI, H.; SZNIDER, [illegible]

Polarization of neutrons from the D (d,n) ^{3}He reaction for deuteron energies between 5.9 and 11.3 MeV. Inst fiz jadr report no. 262:1-10 '63

1. Instytut Fizyki Jadrowej, Krakow.

SZMIDT, A.

A few remarks on the possibilities of increasing the natural resistance of forests. p. 57

SYLWAN. (Wydział Nauk Rolniczych i Lesnych Polskiej Akademii Nauk i Polskie Towarzystwo Leśne) Warszawa, Poland (Journal on forestry issued by the Section of Agricultural and Forestry Sciences, Polish Academy of Sciences; and the Polish Society of Forestry; with English and Russian summaries. Includes supplements; Biuletyn Instytutu Badawczego Lesnictwa, bulletin of the Forest Research Institute; Biuletyn Instytutu Technologii Drewna, bulletin of the Institute of Wood Technology; Przeglad Dokumentacyjny Drzewnictwa, documentation of the Institute of Wood Technology; and Prezeglad Dokumentacyjny Lesnictwa, documentation of the Forest Research Institute. Monthly)
Vol. 101, no. 2, Feb 1957

Monthly List of East European Accessions Index (EEAI), LC, Vol. 8, no. 6, June 1959
Uncl/

SZMIDT, A.
MICHALKSI, J.

Observations on some methods of fighting Blastophaga. p. 55

SYLWAN. (Wydzial Nauk Rolniczych i Lesnych Polskiej Akademii Nauk i Polskie Towarzystwo Lesne) Warszawa, Poland
Vol. 101, no. 7, July 1957

Monthly List of East European Accessions Index (EEAI), LC, Vol. 8, no. 6, June 1959
Uncl.

SZMIDT, ALFRED.

Wykorzystanie Dahlbominus fuscipennis Zett. (Chalcididae, Hym.) do zwalczania borecznikow (Diprioninae, Hym.)

Poznan, Poland. Panstwowe Wydawn. Naukowe, 1959, 55p.

Monthly List of European Accessions (EEAI) LC,Vol. 8, no. 7, July 1959

Uncl.

SZMIDT, Alfred

Observations on Tritneptis klugi (Ratz.) (Hym., Pteromalidae) with regard to their usefulness in biological pest control. Prace nauk roln i lesn 15 no.2:201-208 '63.

1. Katedra Ochrony Lasu, Wyzsza Szkola Rolnicza, Poznan.

SZMIDT, Alfred (Poznan)

Chemical and biological methods of plant protection. Wszechswiat no. 2:33-35 F '64.

SZMIDT, Boleslaw

Trends in the education of architects in the US. Architektura Pol no.10:391-396 '61.

SZMIDT, E.

SZMIDT, E., BYRSKI, E.: "Some Remarks Concerning Slab Magnesite Compound Floors" p. 104. (Przeglad Budowlany, Vol. 25, no. 3, Mar. 1953, Warszawa)

SO: Monthly List of East European Accessions, Library of Congress, February, 1954 ~~1953~~, Vol. 3, NO. 2, Uncl.

SZMIDT, E.

TECHNOLOGY

periodicals: [illegible] Vol. 7, no. 6, June 1958

SZMIDT, E. Results of introductory investigations on the adhesiveness of concrete to the cores for molding hollows in prefabricated concrete elements. p. 12

Monthly List of East European Accessions (EEAI) LC Vol. 8, no. 5 May 1959, Unclass.

SZMIDT, F.

Difficulties of planning in the repair of railroad buildings and installations.

P. 40. (PRZEGLAD KOLEJOWY DROGOWY) (Warszawa, Poland) Vol. 10, no. 2, Feb. 1958

SO: Monthly Index of East European Accession (EEAI) LC Vol. 7, No. 5, 1958

SZMIDT, F.

Review of measures taken in view of adapting railroad buidings and installations to the summertime traffic. p. 101.

PRZEGLAD KOLEJOWY DROGOWY. (Wydawnictwa Komunikacyjne) Warszawa, Poland.
Vol. 10, no. 5, May 1958.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, no. 8, Aug. 1959.

Uncl.

SZMIDT, Franciszek, mgr.inz.

On the problem of taking over the realization of some investment tasks by the Road Service. Przegl kolej drog 14no.5:90-91 My '62

SZMIDT, K.

Pottery workers of debate about the improvement of the organization of production. p. 300.

SZKLO I CERAMIKA. (Centralne Zarzady Przemyslu Szklarskiego i Ceramicznego oraz Stowarzyszenie Naukowo-Techniczne Inzynierow i Techników Przemyslu Chemicznego) Warszawa, Poland.
Vol.6, no.12, Dec. 1955.

Monthly List of East European Accessions (EEAI) LC, Vol.9, no.1, Jan. 1959.

Uncl.

SZMIDT, K.

Mammals of New Guinea. Wszechswiat no.11:292-293 N '62.

SZMIT, K.; ZAK, T.; DALLOS, Kalman [translator]

Fine surface processing by the Roto-Finish method. Gepgyartastechn 2 no.12:470-472 D '62.

SZMIDT, Kazimierz (Gdansk)

Petroleum prospecting in the Australian part of New Guinea.
Czasop geograf 33 no.4:493 '62.

SEMIOT, Kazimierz

Forces occurring in a wheel during braking. Przegl kolej mechan 11 [i.e. 16] no.6:183-185 no.6:183-185 Je '64

1. Central Car Management, Warsaw.

SZMODITS, K., Doctor of Technical Sciences

Investigation of rectangular plates and gridworks on the basis of different boundary conditions. Acta techn Hung 48 no. 1/2:23-29 '64.

1. Institute of Building Sciences, Budapest.

SZMIDT, K.

The work performance of brakes in freezing temperatures.

P. 301 (Przeglad Kolejowy Mechaniczny Vol. 8, no. 10, Oct. 1956, Warszawa, Poland)

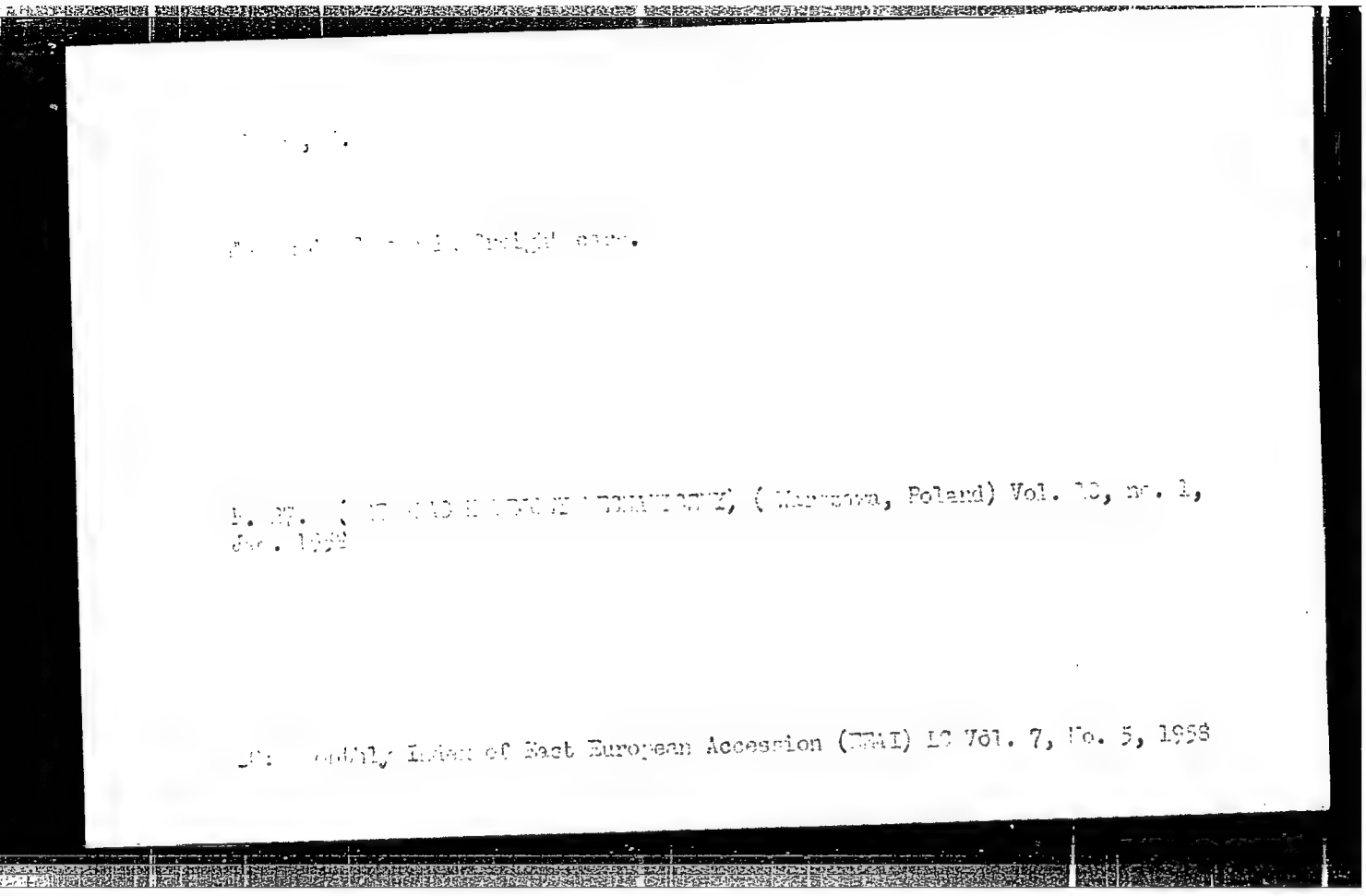
Monthly Index of EastEuropean Accessions (EEAI) LC. Vol. 7½ no. 2,
February 1958

SZMIDT, K.; GRZYBOWSKI, T.

Principles of braking a train. p. 109.

(PRZEGLAD KOLEJOWY MECHANICZNY. Vol. 9, No. 4, Apr. 1957. Warszawa, Poland)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 10, October 1957. Uncl.



SZMIDT, K.; WASILEWSKI, G.

DAKO brake control valves. p. 118.

PRZEGLAD KOLEJOWY MECHANICZNY. Warszawa, Poland, Vol. 10, no. 4, Apr. 1958.

Monthly List of East European Accessions (EEAI), LC, Vol, 8, no. 9, September, 1959.
Uncl.

SZMIDT, Kazimierz, inz.; WASILEWSKI, Gracjan, mgr inz.

Electropneumatically controlled brakes on the railroads in the U.S.S.R. Przegl kolej mechan 13 no.2:43-44, 53-55 F '61.

SZMIDT, Kazimierz, mgr inz.

Oerlikon brakes on the rolling stock of the Polish State Railroads.
Przegl kolej mechanik 13 no.6:173-177 Je '61.

SZMIDT, Kazimierz

Brakes of freight cars marked SS. Przegl kolej mechan 15 no.2:45-47 F '63.

1. Centralny Zarzad Wagonow, Warszawa.

SZMIDT, Kazimierz

Railroad traction on combined brakes. Przegl kolej mechan 16 [1.e. 15] no.3:83-85 Mr '63.

1. Centralny Zarzad Wagonow, Warszawa.

SZMIDT, Kazimierz

Brake releases, their importance and use. Przegl kolej mechan 16 [i.e.15] no. 7:199-203 Jl '63.

1. Centralny Zarzad Wagonow, Warszawa.

Szmidt, K.

4

3006 66.087 : 661.85

Szmidt K. **Polarographic Method of Determining the Coexistence in Water Solutions of Lead and Chloride Ions.**

Badania metodą polarograficzną warunków współistnienia jonów [illegible] w roztworach wodnych [Prace GI Inst. [illegible]. No. 4]. Warszawa, 1952, PWT, 9.5 pp., 7 figs.

polarographic experiments were carried out, at a temperature over lead nitrate solutions, at a concentration of from 10^{-3} to 10^{-2} 1.56 N, in solutions of ammonium chloride, potassium and hydrochloric acid in concentrations of from 10^{-4} 7.84 10^{-1} 1.212 N. Curves were [illegible] by the author as an aid to mining concentrations of constituents in which sediments of lead and complex salts of lead precipitate. The author also shows how to use these graphs for practical purposes. He deals, however, with the influence of acids on the precipitation of sediments, draws attention to the likely occurrence of super-saturated solutions.

SZMIDT, K.

03

Polarographic determination of nickel in steel with diphenylglyoxime. K. Szmidt. *Prace Inst. Mech.* 3, No. 8, 1–5(1953).—Ni was det'd. in steel on a Cambridge polarograph operating on 3 v. Mercury drop electrode was used in all detns. Ni solns. were titrated with a 0.04 to 0.05% soln. of diphenylglyoxime in a mixt of 60% EtOH and 40% MeOH. Dissolve the sample in little concd. HCl and a few drops of HNO_3. Neutralize with concd. NH_4OH, add a little 0.2*N* NH_4Cl, and dil. to a definite vol. Mix and filter to remove the $Fe(OH)_3$. Place 2–3 ml. in the polarograph container to which a few drops of 1% gelatin soln. was added. The sensitivity of the galvanometer was adjusted to permit the measurements to be made in the range from −0.4 to −1.4 v. M. O. Holowaty

SZMIDT, K.

POL.

663.631 : 661.183

3325

Szmidt K., Kolanko Z., Błaszkowska Z. Preparation, by Means of Ion Exchange Resins, of High-Purity Water for Special Purposes.

„Przygotowanie wody o wysokiej czystości do celów specjalnych metodą jonitową". (Prace Inst. Mechan. No. 9), Warszawa, 1953, PWT, 16 pp., 10 figs., 5 tabs.

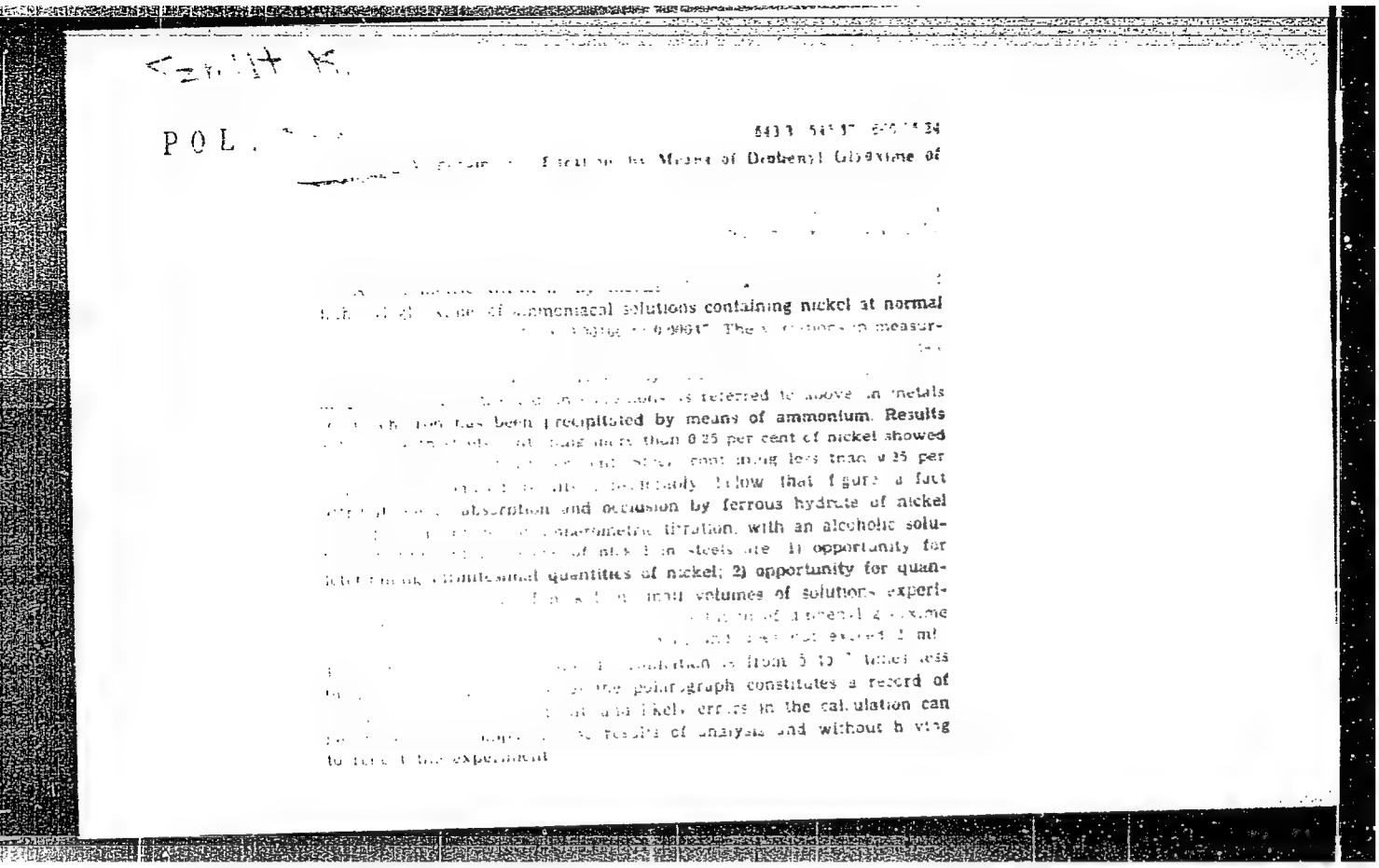
Results of laboratory experiments carried out with a view to obtaining water in a state of high purity. The following ion exchange resins were used for this purpose: Ecarbo 297 — a cation exchange resin made in Poland (Z = 0.620 mval/gm); an anion exchange resin „A" — of American origin (Z = 3.222 mval/gm); and a German ion exchange resin — Wofatit MD (Z = 2.18 mval/gm). A set of tanks was designed for demineralising water. This included a tank to contain mixed ion exchange resins. The purity of the water obtained and the low cost of water purification proved the rational nature of this tank system. It was established that the dry residue, after the water purified

OVER (2)

SCHILDT K., KOLANKO Z., [illegible]

by means of ion exchange resins had been driven off, was entirely free from mineral matter, though it revealed infinitesimal traces of organic compounds containing nitrogen and emanating from the partial extraction of anion exchange resins. No reference has been found in either foreign or Polish science transactions as to the presence of such residual deposit or how to eliminate it. More satisfactory results in demineralising water can, under prevailing circumstances, be obtained by using a combination mixture of Escarbo and Wofatit MD ion exchange substances than by using an Escarbo and anion exchange resin „A" combination. Correct choice of iron exchange resins — particularly anion exchange substances — is likely to produce excellent results in the purification of water intended for special purposes. These would be in no respect inferior, and in fact superior, to redistilled water prepared in the laboratory.

2/2



Smith K.

POL.

[illegible] Means of Dodecyl Glyoxime of

[illegible] of ammoniacal solutions containing nickel at normal [illegible] 0.9961". The [illegible] measur-

[illegible] is referred to above in metals [illegible] has been precipitated by means of ammonium. Results [illegible] than 0.25 per cent of nickel showed [illegible] less than 0.25 per [illegible] absorption and occlusion by ferrous hydrate of nickel [illegible] titration, with an alcoholic solu- [illegible] of nickel in steels are 1) opportunity for [illegible] quantities of nickel; 2) opportunity for quan- [illegible] small volumes of solutions experi- [illegible] of ammonia [illegible] ml [illegible] from 5 to [illegible] titled less [illegible] the polarograph constitutes a record of [illegible] errors in the calculation can [illegible] results of analysis and without having to [illegible] experiment

Szmidt, K.

√ Amperometric Titration of Nickel in Steels with Diphenylglyoxime. K. Szmidt. (*Prace Instytutow Mechaniki*, 1953, 5, (8), 1–5). [In Polish.] A polarographic method of determining nickel in steels using α-diphenylglyoxime was tested. For steels in which the nickel content was above 0·25%, the results obtained were within 3·3% of those obtained by the usual gravimetric method. The procedure is described.—v.G.

SZMIDT, Konrad

(4)

Chemical Abstracts
May 25, 1954
Water, Sewage, and
Sanitation

Preparation of high-purity water by the ion-exchange method. Konrad Szmidt, Zdzisław Kolanko, and Zofia Błaszkowska. *Prace Inst. Mechaniki* 3, No. 9, 1–15(1953). —Investigation of 3 com. ion-exchange resins Escarbo 297 (Poland), Anionite "A" (U.S.A.), and Wofatit MD (Germany) on their ability to produce high-purity water from distd. water showed: (1) the dry residue after evapn. of the water treated with all 3 products contained no mineral substances and only in significant amts. of org. N compds. derived apparently from the anionite; (2) a mixt. of Escarbo 297 and Wofatit MD seemed to perform better than the mixt. of Escarbo and Anionite; (3) use of ion exchangers is satisfactory for production of high-purity water which usually contains less impurities than double distd. water. M. O. Holowaty

SZMIDT, K.

Poland/Analytical Chemistry - Analysis of Inorganic Substances, G-2

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61844

Author: Szmidt, K.

Institution: None

Title: Amperometric Determination of Nickel in Steel by Means of Diphenylglyoxime

Original Periodical: Amperometryczne miareczkowanie niklu w stalach za pomoca dwufenyloglioksymu, Praca Inst. mech., 1953, No 8, 1-5; Polish; Russian and French resumés

Abstract: There has been worked out a method of amperometric titration of ammoniacal solutions containing Ni at concentrations 0.00160-0.00045 N, by means of 0.0021 M alcoholic solution of diphenylglyoxime (I). Discrepancies between the described and the classical method are of ~3%. For steel containing >0.25% Ni an analogous discrepancy has been found (~3.3%); with lesser content Ni discrepancy is greater which is due to occlusion of Ni^{2+} by $Fe(OH)_3$. Advantage of the

Card 1/2

SZMIDT, KONRAD

Poland/Chemical Technology - Chemical Products and Their Application. Electrochemical Manufacturing. Electrodeposition. Chemical Sources of Electrical Current, I-8

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62204

Author: Szmidt, Konrad; Kolanko, Zdzislaw; Latoszek, Jan

Institution: None

Title: Regeneration of Nickel Electrolytes

Original Periodical: Regeneracja zuzytych niklowych kapieli galwanicznych, Prace inst. mech., 1955, 5, No 15, 36-40; Polish; Russian and French resumés

Abstract: For the regeneration of contaminated Ni-electrolytes it is recommended to treat them with 0.7 N NH_4OH to a pH 6.6; this removes all the impurities except 0.012% Zn which does not interfere with subsequent use. Further treatment of the solution by passing it over sulfonated coal permits to remove considerable amounts of NH_4^+ and Cl^-, but the amount of Zn^{2+} remains almost unchanged. Further alkalinization of the solution to pH 6.85 removes almost all of the

Card 1/2